

In the Claims

This listing of claims will replace all prior versions, and listings, of claims.

Listing of Claims

1. (Previously Presented) An apparatus for improving the management of received data packets of a host system that comprises a plurality of data buffers and a plurality of descriptors that corresponds to a subset of the plurality of data buffers to manage the received data packets, the apparatus comprising:

a receiver for receiving a data packet;

a first storage unit for storing the data packet from the receiver;

a counter for counting a number of descriptors in a first state to produce a count value;

a second storage unit for storing a threshold value;

a comparator for comparing the count value with the threshold value and producing a comparison signal; and

a masking circuit, for blocking an error signal which indicates the data packet is an error data packet until the count value reaches the threshold value;

wherein the apparatus issues a first event to the host system according to the comparison signal.

2. (Original) The apparatus of claim 1 further comprising a Receive DMA (direct memory address) for transferring the data packet from the first storage unit into the data buffers.

3. (Original) The apparatus of claim 2 wherein the counter, the second storage unit, and the comparator are positioned within the Receive DMA module.

4. (Original) The apparatus of claim 1 wherein the first event indicates that data buffers corresponding to the descriptors should be cleared.

5. (Original) The apparatus of claim 1 wherein the first state is an unavailable state.

6. (Original) The apparatus of claim 1 wherein the threshold value is programmable.

7. (Original) The apparatus of claim 1 wherein the first state is a free state.

8. (Original) The apparatus of claim 1 wherein the apparatus issues a second event when the data packet is an ok packet.

9. (Original) The apparatus of claim 8 wherein the data buffers corresponding to the descriptors are cleared when the first event or the second event is issued.

10. (Original) The apparatus of claim 1, wherein the apparatus is a wireless network device.

11. (Previously Presented) A method for improving the management of received data packets of a host system that comprises a plurality of data buffers and a plurality of descriptors that corresponds to a subset of the data buffers to manage the received data packets, the method comprising:

receiving a data packet;

transferring the data packet into at least one of the data buffers;

counting an amount of the descriptors in a first state;

comparing the amount with a threshold value to generate a comparison signal;

and

generating a first event to the host system according to the comparison signal and based on whether a masking circuit is engaged, wherein generating the first event is performed to prevent all the descriptors from being in the first state, and wherein the masking circuit is engaged if the data packet is an error data packet.

12. (Original) The method of claim 11 wherein the first state is an unavailable state.

13. (Original) The method of claim 11 wherein the threshold value is programmable.

14. (Original) The method of claim 11 wherein the first state is a free state.

15. (Original) The method of claim 11 further comprising:
generating a second event when the data packet is an ok packet.

16. (Original) The method of claim 15 wherein the data buffers corresponding to the descriptors are cleared when the first event or the second event is generated.

17. (Previously Presented) The method of claim 11 wherein the amount of the descriptors in the first state is monitored when a plurality of error data packets are continuously received.

18. (Previously Presented) A method for improving the management of data packets received from a network by a host system that comprises a plurality of data buffers and that utilizes a plurality of descriptors that corresponds to a subset of the plurality of data buffers to manage the data packets received from the network, the method comprising:

receiving a data packet from the network;

transferring the data packet into at least one of the data buffers;

counting a number of descriptors that will have their state changed when the data packet is transferred;

calculating a count value according to the number of descriptors that will have had their state changed by the data packet being transferred; and

comparing the count value with a threshold value, and triggering a first event to the host system when the count value reaches the threshold value and based on whether a masking circuit is engaged;

wherein the first event notifies the host system to clear the data buffers corresponding to the descriptors, and wherein the masking circuit is engaged if the data packet is an error data packet.

19. (Canceled)

20. (Previously Presented) The apparatus of claim 1 wherein the counter monitors the number of the descriptors in the first state to produce the count value when the apparatus continuously receives a plurality of error data packets; wherein the counter is reset when the data packet is an ok data packet.